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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/630,583	07/29/2003	Kristopher J. Frutschy	042390P16902	1628

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EXAMINER

LE, THANH TAM T

ART UNIT PAPER NUMBER

2839

DATE MAILED: 01/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/630,583	Applicant(s) FRUTSCHY, KRISTOPHER J.	
	Examiner Thanh-Tam T. Le	Art Unit 2839	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,5-10 and 12-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,5-10 and 12-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claim 1, lines 11 and 12, "the interconnection element" should be changed -- the each interconnection element --;

line 12, "the protrusion" should be changed -- the respective protrusion --;

line 13, "the first metal portion" lacks an antecedent basis.

Claim 10, line 15, "the respective interconnection element" lack an antecedent basis;

line 16, "the respective protrusion" lack an antecedent basis;

line 17, "the first metal portion" lacks an antecedent basis.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 3, 5-8, 10 and 12-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Borsuk (3,927,925).

Regarding claims 1, 10 and 14, Borsuk, figures 1 and 2 show a socket for a microelectronic component, comprising:

- a socket body (14) having a horizontal base with upper and lower substantially horizontal sides and including at least a power metal portion (16,

column 3, line 32), a ground metal portion (18, column 3, line 33) and a dielectric portion (20, column 3, line 46), and side walls extending upward from the base, the side walls having inner surfaces jointly defining a recessed formation for receiving the microelectronic component;

- a plurality of contacts (a distal end of 52) on the socket body;
- a plurality of terminals (56) on the socket body;
- a plurality of interconnection elements (54) in the socket body, each interconnecting a respective contact with a respective terminal; and
- a respective protrusion (70) on each respective interconnection element, the each interconnection element and the respective protrusion being inserted into an opening (30) in the socket body until the protrusion is in contact with the power metal portion, a power set (42c) of the interconnection elements electrically connected to the metal power portion, a ground set (42b) of the interconnection elements all being electrically connected to the ground metal portion, and a signal set (42a) of the interconnection elements each being electrically disconnected from both the power and ground metal portions.

Regarding claim 3, a stop component (62, figure 2) on the interconnection element to limit how far the interconnection element is inserted into the opening and to ensure that the protrusion is in line with the metal portion.

Regarding claims 5 and 12, the power metal portion is at a different elevation than the ground metal portion, at least some of the interconnection elements each being inserted into a respective opening (30) in the socket body, the protrusions of the power

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set being in contact with the power metal portion and the protrusions of the ground set being in contact with the ground metal portion (figure 1).

Regarding claims 6, 13 and 17, a stop component (62), the protrusion (70) of each interconnection element of the power set (42c) being at a first distance from the stop component and the protrusion of each interconnection element of the ground set (42b) being at a second distance, different to the first distance, from the stop component.

Regarding claims 7 and 16, protrusions (figure 1, at an area that contacts 30) on the interconnection elements of the signal set (42a) contact the dielectric portion (20).

Regarding claims 8 and 18, a plurality of spring components (52, figure 2) on the interconnection element, each contact being on a respective spring component.

Regarding claim 15, is rejected as same as claims 5 and 6 above.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 9 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Borsuk (3,927,925) in view of Noda et al. (6,827,586).

Borsuk discloses the claimed invention as described above except for a solder ball on the interconnection element.

Noda et al., figure 1, disclose a receptacle connector assembly (1) having a solder ball (22). It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide Borsuk to have the solder ball, as taught by Noda et al., for better connection.

Response to Arguments

6. Applicant's arguments with respect to claims 1, 10 and 14 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh-Tam T. Le whose telephone number is 571-272-2094. The examiner can normally be reached on 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, TC Patel can be reached on 571-272-2098. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'T. Le', with a horizontal line drawn underneath it.

Thanh-Tam T. Le
Primary Examiner
Art Unit 2839

TL.
01/20/06.